

REMARKS

Claims 1-23 are currently pending in this application. Claims 13-21 have been withdrawn from consideration as being drawn to non-elected subject matter. Claim 1 has been amended for clarity. Claim 22 finds support in page 7, lines 18-19. Claim 23 finds support in page 7, lines 18-19 and in claim 9. No new matter has been added by way of the above-amendment.

Mino

Claims 1-5 and 7-12 are rejected under 35 U.S.C. 102(b) as being anticipated by Mino (JP 10-209463). Applicants respectfully traverse the rejection.

The Examiner has taken the position that Mino teaches the invention as recited in claims 1-5 and 7-12. Specifically, the Examiner has noted that Mino discloses use of a substrate, a transparent base and a transparent film, within which a groove is fashioned to hold the wiring components, thereby creating a circuit that is flush with the surrounding insulation. In order to further distinguish from Mino, Applicants have amended claim 1. This amendment is discussed below.

The Examiner will note that Mino is discussed in the "Background Art" section of the present application. In the "Background Art" section of the present application, the present inventors state:

"[Mino] discloses a wiring forming method wherein, in order to reduce the resistance of wiring and improve brightness (aperture ratio) of a display screen, a first wiring pattern is provided by selectively forming a transparent conductor film such as an ITO film on the surface of a display substrate and, after covering the first wiring pattern and the surface of the display substrate with a resist film having transparency, the resist film is selectively opened to expose a part of the first wiring pattern and a second wiring pattern having a greater thickness and a narrower width than the first wiring pattern is formed on the exposed first wiring pattern by electroless plating.

In this manner, by using the transparent conductive film having the relatively wide width as the first wiring pattern, what shields light in the thickness direction becomes only the second wiring pattern to thereby

enable a reduction of a shield area in the thickness direction and, further, by forming the second wiring pattern having the large thickness, the resistance of the whole wiring patterns can be reduced...

This method [of Mino] is not practical because the formation of the first and second wiring patterns increases the manufacturing processes to thereby require much time and cost. Further, there is a problem that rising of the surface of the resist film covering the first wiring pattern degrades the flatness of the resist film. As a result, a level difference is generated on the surface of the resist film.

As described above, when another electrode pattern is formed on the resist surface having the level difference and on the second wiring pattern and the wiring and the electrode pattern are electrically connected, there is a drawback that the electrode pattern or the like are often subjected to an accident such as disconnection or short and therefore the yield is low in the display device manufacture."

In order to more clearly align the presently claimed invention with the distinguishing features discussed in the above-cited section of the specification, claim 1 has been amended as follows:

1. A substrate, comprising:

a transparent base,

a transparent film deposited directly on the transparent base, in which a groove in the deposited transparent film is formed to reach a main surface of said transparent base, and

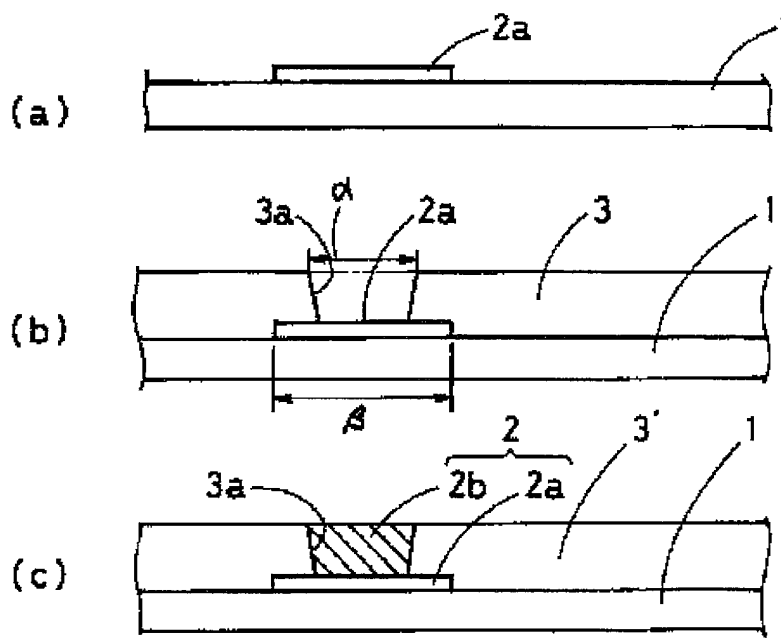
a wiring portion formed in said groove and in contact with said transparent base,

wherein said groove has a maximum width and a minimum width, and said wiring portion in said groove has a width and a thickness determined by correlation with the maximum width and the minimum width of said groove.

Compared to Mino, the present method provides for better conductivity, less resistance in the wiring pattern, and a surface that is flush with the surrounding insulating material, resulting in a more secure connection.

Mino teaches in Figure 1, the following steps (a)-(c):

【図 1】



In Mino's method, the wiring pattern 2a is formed before the step of depositing the transparent film and before the step of forming the groove in the deposited transparent film. As such, wiring pattern 2a cannot be the inventive "wiring portion formed in said groove and in contact with said transparent base."

Also, in Mino's method, the wiring pattern 2b is formed on top of wiring pattern 2a, so wiring pattern 2b is not in contact with the transparent base, as presently claimed.

MPEP 2131 states: "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." In view of the fact that Mino fails to teach or fairly suggest that the wiring portion is formed in a groove in the transparent film and in contact with a transparent base, Mino does not anticipate the presently claimed invention. As such, reconsideration and withdrawal of the anticipation rejection are respectfully requested.

Mino and Odemura

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mino (JP 10-209463) in view of Odemura (JP 2001-188343 A). Applicants respectfully traverse the rejection.

Inventive claim 6 recites that the transparent film is formed using a resin composition comprising an alkali-soluble alicyclic olefin resin and a radiation-sensitive component. The Examiner is aware that Mino does not teach or suggest this feature, and as such, the Examiner relies on Odemura.

However, Odemura fails to cure the deficiencies of Mino as described in the previous section. Specifically, Odemura (like Mino) fails to teach or fairly suggest that the wiring portion is formed in a groove in the transparent film and in contact with a transparent base.

In view of the fact that the combination of Odemura and Mino, still fails to teach or suggest all of the claim limitations, a *prima facie* case of obviousness cannot be said to exist. As such, reconsideration and withdrawal of the obviousness rejection are respectfully requested.

New claims 22 and 23

Applicants have added new claim 22 which is further distinguished from the cited references. This claim recites that the wiring portion is a single layer structure.

Also, Applicants have added new claim 23 which is further distinguished from the cited references. This claim recites that the wiring portion is a single layer structure and that the single layer structure has a specific thickness in relation to the width of the groove.


In view of the above amendment, Applicants believes the pending application is in condition for allowance.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Garth M. Dahlen, Ph.D., Esq., Reg. No. 43,575, at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37.C.F.R. §§1.16 or 1.17; particularly, extension of time fees.

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Respectfully submitted,

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